

In the Claims

Please replace all prior versions and listings of claims in this application with the following list of claims:

1. (Currently amended) A method of stimulating an immune response, comprising administering an immunostimulatory nucleic acid ~~selected from the group consisting of a Py-rich nucleic acid and a TG nucleic acid,~~ that is a T-rich immunostimulatory nucleic acid to a non-rodent subject in an amount effective to induce an immune response in the non-rodent subject,

wherein the T-rich immunostimulatory nucleic acid is 8-100 nucleotides in length and has a nucleotide composition of greater than 60% T.

2. (Cancelled)

3. (Currently amended) The method of claim [[2]] 1, wherein the T-rich immunostimulatory nucleic acid is a poly T nucleic acid comprising

5' TTTT 3'.

4. (Original) The method of claim 3, wherein the poly T nucleic acid comprises

5' X₁ X₂TTTXX₃ X₄ 3'

wherein X₁, X₂, X₃ and X₄ are nucleotides.

5. (Original) The method of claim 3, wherein the T-rich immunostimulatory nucleic acid comprises a plurality of poly T nucleic acid motifs.

6. (Original) The method of claim 4, wherein X₁X₂ is TT.

7. (Original) The method of claim 4, wherein X₃X₄ is TT.

8. (Original) The method of claim 4, wherein X₁X₂ is selected from the group consisting of TA, TG, TC, AT, AA, AG, AC, CT, CC, CA, GT, GG, GA, and GC.

9. (Original) The method of claim 4, wherein X_3X_4 is selected from the group consisting of TA, TG, TC, AT, AA, AG, AC, CT, CC, CA, GT, GG, GA, and GC.

10. – 14. (Cancelled)

15. (Original) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid comprises a nucleotide composition of greater than 80% T.

16. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid comprises at least 20 nucleotides.

17. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid comprises at least 24 nucleotides.

18. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid has a nucleotide backbone which includes at least one backbone modification.

19. (Original) The method of claim 18, wherein the backbone modification is a phosphorothioate modification.

20. (Original) The method of claim 18, wherein the nucleotide backbone is chimeric.

21. (Original) The method of claim 18, wherein the nucleotide backbone is entirely modified.

22. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of CpG dinucleotides.

23. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of unmethylated CpG dinucleotides.

24. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of methylated CpG dinucleotides.

25. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of poly-C sequences.

26. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid includes a poly-A sequence.

27. (Currently amended) The method of claim 20, wherein the T-rich immunostimulatory nucleic acid includes a poly-G sequence.

28. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid comprises a nucleotide composition of greater than 25% C.

29. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid comprises a nucleotide composition of greater than 25% A.

30. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is administered orally.

31. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is administered locally.

32. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is administered in a sustained release device.

33. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is administered mucosally to a mucosal surface.

34. (Original) The method of claim 33, wherein the immune response is a mucosal immune response.

35. (Original) The method of claim 33, wherein the immune response is a systemic immune response.

36. (Original) The method of claim 33, wherein the mucosal surface is selected from the group consisting of an oral, nasal, rectal, vaginal, and ocular surface.

37. (Original) The method of claim 1, further comprising exposing the subject to an antigen and wherein the immune response is an antigen-specific immune response.

38. (Original) The method of claim 37, wherein a nucleic acid vector which encodes the antigen is administered to the subject, and wherein the nucleic acid vector is separate from the immunostimulatory nucleic acid.

39. (Original) The method of claim 37, wherein the antigen is a peptide antigen.

40. – 51. (Cancelled)

52. (Currently amended) The method of claim [[47]] 1, wherein the subject is a human.

53. (Currently amended) The method of claim [[47]] 1, wherein the subject is selected from the group consisting of a dog, a cat, [[and a]] horse, cow, pig, sheep, goat, chicken, monkey, and fish.

54. (Currently amended) The method of claim 1, further comprising administering an antibody specific for a cell surface antigen, and wherein the immune response results in antigen antibody dependent cellular cytotoxicity (ADCC).

55. – 76. (Cancelled)

77. (Currently amended) A method for inducing an innate immune response, comprising administering to the subject an immunostimulatory nucleic acid in an amount effective for activating an innate immune response, wherein the immunostimulatory nucleic acid is ~~selected from the group consisting of a T-rich immunostimulatory nucleic acid and a TG-nucleic acid,~~ and wherein the T-rich immunostimulatory nucleic acid is 8-100 nucleotides in length and has a nucleotide composition of greater than 60% T.

78. – 84. (Cancelled)

85. (Currently amended) The method of claim 5, wherein the T-rich immunostimulatory nucleic acid comprises at least 3, at least 4, at least 5, at least 6, at least 7, or at least 8 poly T nucleic acid motifs.

86. – 87. (Cancelled)

88. (Currently amended) The method of claim 5, wherein the plurality of poly T nucleic acid motifs is at least 3 motifs ~~and wherein at least 3 motifs each comprises at least 3 contiguous T nucleotide residues.~~

89. (Currently amended) The method of claim 5, wherein the plurality of poly T nucleic acid motifs is at least 4 motifs ~~and wherein the at least 4 motifs each comprises at least 3 contiguous T nucleotide residues.~~

90. (Currently amended) The method of claim 5, wherein at least one of the plurality of poly T nucleic acid motifs comprises at least 5, at least 6, at least 7, or at least 8 contiguous T nucleotide residues.

91. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of two CpG dinucleotides.

92. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of three CpG dinucleotides.

93. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid includes at least two poly C sequences ~~of at least 3 contiguous C nucleotide residues.~~

94. (Currently amended) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid is free of two poly A sequences ~~of at least 3 contiguous A nucleotide residues.~~

95. – 97. (Cancelled)

98. (Currently amended) The method of claim 90, wherein the plurality of ~~CpG motifs~~ and poly T nucleic acid motifs are interspersed with CpG motifs.

99. – 106. (Cancelled)

107. (New) A method of stimulating a systemic immune response comprising administering a T-rich immunostimulatory nucleic acid to a non-rodent subject in an amount effective to induce a systemic immune response in the non-rodent subject,

wherein the T-rich immunostimulatory nucleic acid is 8-100 nucleotides in length and lacks a CpG motif.

108. (New) A method of stimulating an immune response comprising administering a T-rich immunostimulatory nucleic acid to a non-rodent subject in an amount effective to induce an immune response in the non-rodent subject and an antibody specific for a cell surface antigen,

wherein the immune response results in antibody dependent cellular cytotoxicity (ADCC), and

wherein the T-rich immunostimulatory nucleic acid is 8-100 nucleotides in length and lacks a CpG.

109. (New) The method of claim 108, further comprising administering an antigen to the subject.

110. (New) The method of claim 1, wherein the T-rich immunostimulatory nucleic acid comprises a CpG motif.

111. (New) The method of claim 77, wherein the T-rich immunostimulatory nucleic acid comprises a CpG motif.

112. (New) A method for inducing an innate immune response, comprising administering to the subject an immunostimulatory nucleic acid in an amount effective for activating an innate immune response, wherein the immunostimulatory nucleic acid is a T-rich immunostimulatory nucleic acid, and wherein the T-rich immunostimulatory nucleic acid is 8-100 nucleotides in length and lacks a CpG motif.